DILLON FAA AIRPORT

BEAVERHEAD COUNTY

The Dillon airport is located approximately 5 miles northeast of Dillon at 45 15 00 N and 112 33 00 W (Site No. 1 on Map II-1). Elevation at the airport is 5,223 feet. Meteorological data were collected here for many years by the Federal Aviation Administration.

These data, primarily collected for aviation and weather forecasting uses, consist of short-term (5 minutes or less) averages of wind speed and direction, as well as other meteorological parameters. Data were gathered once per hour. The data have been analyzed by Battelle Pacific Northwest Laboratories. Because of a change in anemometer height, the data set was split into two parts for analysis: June 19, 1951, through October 29, 1963; and October 30, 1963, through June 18, 1973. Data from the latter period only were selected for inclusion in the *Montana Wind Energy Atlas.*

The data set for Dillon consists of summaries of observations made every third hour from October 30, 1963, through June 18, 1973. The anemometer was mounted on a ground mast at a height of 6.1 meters. The site is representative of the Jefferson River Valley from Twin Bridges to south of Dillon.

Average monthly wind speed varied from 7.6 miles per hour in July and August to 10.5 miles per hour in January. Average annual wind speed was 9.2 miles per hour.

Average monthly wind power ranged from 43.0 watts/m^2 in August to 114.0 watts/m^2 in January. Average annual wind power was 80.0 watts/m^2.

Table IV - 3

Monthly Wind Speed Distribution

BEAVERHEAD COUNTY - DILLON FAA AIRPORT

10/30/63 - 06/18/73

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	YEAR		
CALM (<1.1)	5.6	7.0	5.7	5.7	5.7	8.5	8.8	7.5	6.7	7.1	8.3	7.9	7.0	CALM (<0.5)	
1.1- 3.1	0.6	0.7	0.7	0.8	0.8	0.8	1.2	0.8	1.0	0.8	0.8	0.7	0.8	0.5- 1.4	
3.4- 5.4	9.7	9.6	12.1	11.7	14.2	13.8	16.8	16.1	14.4	12.9	13.2	12.0	13.0	1.5- 2.4	S
S 5.6- 7.6	16.1	19.9	18.9	19.2	22.5	24.7	30.0	30.4	24.0	22.7	22.0	20.7	22.5	2.5- 3.4	P
P 7.8- 9.8	20.0	19.8	17.6	19.1	20.1	21.8	22.4	24.1	23.5	23.0	22.7	19.0	21.0	3.5- 4.4	E
E 10.1-12.1	14.6	15.4	13.8	12.2	12.0	10.4	8.4	10.3	12.7	13.7	12.2	13.9	12.5	4.5- 5.4	E
E 12.3-14.3	8.6	8.2	8.6	7.7	7.1	7.1	4.3	3.8	5.6	5.5	6.1	7.9	6.8	5.5- 6.4	D
D 14.5-16.6	6.8	5.5	6.6	5.5	4.4	4.3	2.4	2.6	3.4	3.6	4.2	6.0	4.7	6.5- 7.4	
16.8-18.8	9.2	7.5	8.4	8.0	6.6	5.4	2.9	2.5	4.4	4.7	6.1	6.3	6.0	7.5- 8.4	M
M 19.0-21.0	4.3	2.8	3.7	3.7	2.8	1.5	1.2	0.7	1.9	3.1	2.2	2.8	2.6	8.5- 9.4	E
I 21.3-23.3	3.3	2.6	3.1	5.0	2.6	1.5	1.1	0.9	1.8	2.3	1.7	2.1	2.3	9.5-10.4	T
L 23.5-25.5	0.5	0.6	0.3	0.7	0.3	0.0	0.2	0.1	0.2	0.2	0.2	0.5	0.3	10.5-11.4	E
E 25.7-27.7	0.2	0.0	0.0	0.3	0.2	0.0	0.0	0.0	0.2	0.1	0.1	0.0	0.1	11.5-12.4	R
S 28.0-30.0	0.4	0.4	0.5	0.5	0.4	0.1	0.3	0.1	0.3	0.1	0.1	0.4	0.3	12.5-13.4	S
/ 30.2-32.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	13.5-14.4	/
H 32.4-34.4	0.0	0.0	0.0	0 1	0.1	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0	14.5-15.4	S
O 34.7-36.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.5-16.4	E
U 36.9-38.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	16.5-17.4	C
R 39.1-41.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	17.5-18.4	O
41.4-43.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	18.5-19.4	N
43.6-45.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.5-20.4	D
45.9-56.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.5-25.4	
57.0-68.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.5-30.4	
68.2-79.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.5-35.4	
79.4-90.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.5-40.4	
>90.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	>40.4	
AVERAGE SPEED (MPH)	10.5	9.8	10.1	10.3	9.4	8.5	7.6	7.6	8.5	8.9	8.7	9.4	9.2		
AVERAGE SPEED (M/SEC)	4.7	4.4	4.5	4.6	4.2	3.8	3.4	3.4	3.8	4.0	3.9	4.2	4.1		
AVERAGE WIND POWER (WATTS/M**2)	114.0	92.0	101.0	112.0	83.0	60.0	48.0	43.0	67.0	73.0	70.0	85.0	80.0		

ANEMOMETER HEIGHT = 20.0 FEET = 6.1 METERS

SOURCE: BATTELLE PACIFIC NORTHWEST LABORATORIES